

Appl. No. : 10/691,471
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AMENDMENTS TO THE CLAIMS

Please cancel Claims 2, 13, 29 and 36, without prejudice

Please amend Claims 1, 10, 12, 21, 27, 30, 32, 34, 38 and 40 as follows.

Please add new Claims 43-48 as follows.

1. (Currently amended) A test method for testing the operational performance of an X-ray facility~~film processor~~, comprising ~~the steps of~~:

scanning a processed X-ray film bearing a test image having known image features at known locations, to create an electronic version of the image; and

measuring the optical density of selected of the known features of the electronic image, to calculate predetermined performance indicators, and to deliver a report of operational performance of the X-ray film processor.

2. (Canceled).

3. (Previously presented) A method according to claim 1, wherein the image scanner is a low cost commercially available flat bed scanner.

4. (Original) A method according to claim 1, wherein the film is calibrated.

5. (Original) A method according to claim 1, wherein the locations of the test image features are predictable in the scanned image.

6. (Previously presented) A method according to claim 5, wherein a template on a scanning bed is used to ensure the locations of the test image features are predictable in the scanned image.

7. (Original) A method according to claim 1, wherein the test image comprises a sensitometric strip or a phantom image.

8. (Previously presented) A method according to claim 42, wherein the programmed computer is remote from the scanner and the electronic image is sent to the computer over the Internet.

9. (Original) A method according to claim 8, wherein the performance indicators include Speed Step (also known as "Mid Density"), Contrast Index (also known as "Density Difference), Base + Fog, Dmax and the Average Gradient.

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10. (Currently amended) A method according to claim 9, wherein the report of operational performance includes the data, and the layout, of report templates, and indicates whether the X-ray ~~facility including an X-ray generator, a film processor, and a screen film combination processor~~ is operating within predetermined tolerances.

11. (Original) A method according to claim 10, wherein a charge is raised on the basis of a fee for each report.

12. (Currently amended) A test system for testing the operational performance of an X-ray ~~facility~~film processor, comprising:

an image scanner having at least 16 bit greyscale capability to scan a processed X-ray film bearing a test image having known image features at known locations, to create an electronic version of the image; and

a programmed computer to measure the optical density of selected of the known features of the electronic image, to calculate predetermined performance indicators, and to deliver a report of operational performance of the X-ray film processor.

13. (Canceled)

14. (Original) A system according to claim 12, wherein the image scanner is a low cost commercially available flat bed scanner.

15. (Original) A system according to claim 12, wherein the film is calibrated.

16. (Original) A system according to claim 12, wherein the locations of the test image features are predictable in the scanned image.

17. (Previously presented) A system according to claim 16, wherein a template on a scanning bed is used to ensure the locations of the test image features are predictable in the scanned image.

18. (Original) A system according to claim 12, wherein the test image comprises a sensitometric strip or a phantom image.

19. (Original) A system according to claim 12, wherein the programmed computer is remote from the scanner and the electronic image is sent to the computer over the Internet.

20. (Original) A system according to claim 19, wherein the performance indicators include Speed Step (also known as "Mid Density"), Contrast Index (also known as "Density Difference), Base + Fog, Dmax and the Average Gradient.

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21. (Currently amended) A system according to claim 20, wherein the report of operational performance includes the data, and the layout, of report templates, and indicates whether the X-ray facility ~~including an X-ray generator, a film processor, and a screen-film combination processor~~ is operating with predetermined tolerances.

22. (Original) A system according to claim 21, wherein a charge is raised on the basis of a fee for each report.

23. (Original) A flat bed scanner having at least 16 bit greyscale capability and calibrated to scan a processed X-ray film bearing a test image having known image features at known locations, to create an electronic version of the image in which the locations of the test image features are predictable.

24. (Original) A flat bed scanner according to claim 23, wherein the scanner is a low cost commercially available flat bed scanner.

25. (Previously presented) A flat bed scanner according to claim 23, wherein a template on the scanning bed is configured to ensure the locations of the test image features are predictable in the scanned image.

26. (Original) A flat bed scanner according to claim 23, wherein the test image comprises a sensitometric strip or a phantom image.

27. (Currently amended) A programmed computer to measure the optical density of selected known features of an electronic version of a test image having known image features at known locations, to calculate predetermined performance indicators, and to deliver a report of operational performance of an X-ray film processor; wherein the electronic version of the test image is produced by the X-ray film processor.

28. (Original) A programmed computer according to claim 27, wherein the test image comprises a sensitometric strip or a phantom image.

29. (Canceled).

30. (Currently amended) A programmed compute according to claim ~~29~~27, wherein the programmed computer is remote from the X-ray film processor and the electronic image is sent to the computer over the Internet.

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31. (Original) A programmed computer according to claim 27, wherein the performance indicators include Speed Step (also known as "Mid Density"), Contrast Index (also known as "Density Difference), Base + Fog, Dmax and the Average Gradient.

32. (Currently amended) A programmed computer according to claim 31, wherein the report of operational performance includes the data, and the layout, of report templates, and indicates whether the X-ray facility ~~including an X-ray generator, a film processor, and a screen film combination processor~~ is operating within predetermined tolerances.

33. (Original) A programmed computer according to claim 32, wherein a charge is raised on the basis of a fee for each report.

34. (Currently amended) A computer readable medium for storing a computer program to measure the optical density of selected known features of an electronic version of a test image having known image features at known locations, to calculate predetermined performance indicators, and to deliver a report of operational performance of an X-ray film process; wherein the electronic version of the test image is produced by the X-ray film processor.

35. (Previously presented) A computer readable medium according to claim 34, wherein the test image comprises a sensitometric strip or a phantom image.

36. (Canceled).

37. (Previously presented) A computer readable medium according to claim 34, wherein the performance indicators include Speed Step (also known as "Mid Density"), Contrast Index (also known as "Density Difference), Base + Fog, Dmax and the Average Gradient.

38. (Currently amended) A computer readable medium according to claim 37, wherein the report of operational performance includes the data, and the layout, of report templates, and indicates whether the X-ray facility ~~including an X-ray generator, a film processor, and a screen film combination processor~~ is operating within predetermined tolerances.

39. (Previously presented) A computer readable medium according to claim 38, wherein a charge is raised on the basis of a fee for each report.

40. (Currently amended) A computer data signal embodied in a carrier wave, wherein the signal is transmitted from a scanner containing an electronic version of a test image having known image features at known locations, to a computer where the optical density of selected of the known features of the electronic image is measured, predetermined performance indicators

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are calculated, and a report of operational performance of an X-ray film processor is prepared;
wherein the electronic version of the test image is produced by the X-ray film processor.

41. (Previously presented) The method of claim 1, wherein the scanning is performed using an image scanner having at least 16 bit greyscale capability.

42. (Previously presented) The method of claim 41, wherein the measuring is performed using a programmed computer.

43. (New) The method of claim 1, further comprising forming a characteristic curve associated with an optical density of each of twenty one exposure steps, wherein the predetermined performance indicators are calculated from analyzing the characteristic curve.

44. (New) The system of claim 12, wherein the test image comprises a sensitometric strip having twenty one exposure steps.

45. (New) The scanner of claim 23, wherein the test image comprises a sensitometric strip having twenty one exposure steps.

46. (New) The computer of claim 27, wherein the test image comprises a sensitometric strip having twenty one exposure steps.

47. (New) The medium of claim 34, wherein the test image comprises a sensitometric strip having twenty one exposure steps.

48. (New) The signal of claim 40, wherein the test image comprises a sensitometric strip having twenty one exposure steps.